AMENDMENTS TO THE CLAIMS

1-7. (Cancelled)

8. (Previously Presented) A method for searching a multiway search tree in which pointer information is assigned to so as to accommodate related information in a cache line independent of a number of keys used in each node, the method comprising the steps of:

a) comparing an inputted IP address with a key value;

b) if the inputted IP address is consistent with the key value, searching an outgoing interface by using a key pointer included in the node;

c) if the inputted IP address is not consistent with the key value, determining a type of the node by searching a node pointer;

d) if the node is a leaf node, searching the outgoing interface by acquiring the key pointer if the inputted IP address is consistent with the key value; and

e) if the node is not the leaf node, moving to a next node with reference to the node pointer, and then repeating the steps of a) to c).

9. (Original) The method as recited in claim 8, wherein the step d) includes the steps of:

d1) finding a key value region having the inputted IP address based on a comparison result of the step a); and

d2) detecting the outgoing interface corresponding to the key value region.

10. (Previously Presented) The method as recited in claim 8, wherein the key value of the node is compared with the inputted IP address based on a longest prefix matching (LPM).

11-12. (Cancelled)

13. (Previously Presented) A computer readable recording medium storing instructions for executing a method for searching a multiway search tree in which pointer information is assigned to so as to accommodate related information in a cache line independent of a number of

keys used in each node, the method comprising the steps of:

a) comparing an inputted IP address with a key value;

b) if the inputted IP address is consistent with the key value, searching an outgoing interface by using a key pointer included in the node;

c) if the inputted IP address is not consistent with the key value, determining a type of the node by searching a node pointer;

d) if the node is a leaf node, searching the outgoing interface by acquiring the key pointer if the inputted IP address is consistent with the key value; and

e) if the node is not the leaf node, moving to a next node with reference to the node pointer, and then repeating the steps of a) to c).

14. (Original) The computer readable recording medium as recited in claim 13, wherein the step b) includes the steps of:

d1) finding a key value region having the inputted IP address based on a comparison result of the step a); and

d2) detecting the outgoing interface corresponding to the key value region.